

Green Buildings Coming to a Town Near You

Kim Trella

CT DEP Pollution Prevention



What you may learn...

- ★ Benefits of building green
- ★ Green schools initiative
- ★ Engaging your community
- ★ Leading to the Future



The Many Names of “Green”

- Sustainable Design
- Green Architecture
- Energy-Conscious Design
- Healthy Building
- High-Performance Building



CT Green Building Council

- ★ CT DEP partners with CTGBC to promote green buildings
- ★ Goal is to promote, through education, the construction and renovation of buildings using green building standards
- ★ 501c3 with broad representation





U.S. Green Building Council

The nation's foremost coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable, and healthy places to live and work.

The organization's purpose is to:

- *Integrate* building industry sectors
- *Lead* market transformation
- *Educate* owners and practitioners



Why Was LEED™ Created?

- To define “green” by providing a standard for measurement
- To act as a design guideline
- To promote a whole-building, integrated design processes
- To establish market value with recognizable national “brand”
- To transform the marketplace!



What does a



Building look like?



Clearview Elementary School, Hanover, PA



Blanchard Hall, Mount Holyoke College



Environmental Studies Center, Oberlin College

How does



work?

LEED System Basics

- ★ Contains
 - 7 prerequisites
 - 69 possible points

Each Prerequisite or Point consists of a specific green building initiative.

- ★ Gives the following ratings:

– Certified	26 Points
– Silver	33 Points
– Gold	39 Points
– Platinum	52 Points



LEED™ Categories

- » Sustainable Sites
- » Water Efficiency
- » Energy and Atmosphere
- » Materials and Resources
- » Indoor Environmental Quality
- » Innovation & Design Process



Local Benefits

- ★ Save taxpayer dollars
- ★ Average Energy Savings on a green building of 20-40% annually
- ★ Water Conservation
- ★ Better Daylighting – improved staff performance/ reduced absenteeism



Environmental Benefits

- ★ Reduction in creation of Greenhouse gases (which lead to global warming)
- ★ Better use of natural resources (recycled materials, certified wood)
- ★ Water conservation (stormwater – rain gardens, efficiency – low flow fixtures, waterless urinals)
- ★ Improved Indoor Air Quality



Green Schools Initiative

- ★ To promote green construction and renovation for CT schools
- ★ Stakeholder process results
- ★ Where to go for help
- ★ Current CT registered LEEDtm projects



Green Schools Initiative

- ★ To promote green construction and renovation for CT schools
- ★ To educate decision-makers as to the lasting value of integrated design
- ★ To provide support to communities interested in building green



Green Schools Initiative

- ★ To educate decision-makers as to the lasting value of integrated design
- ★ Designers of different systems within school work in concert
- ★ At construction completion, building is commissioned to assure performance



Green Schools

- ★ A recent energy benchmarking survey of CT schools found that there is considerable room for savings in our schools
- ★ Current Cost Per Square Foot for Energy
- ★ Highest \$2.87
- ★ Lowest \$.61
- ★ Average \$1.37 sq.ft/year

More information at LeahyW@easternct.edu



Green Schools

- ★ Resources available
- ★ Design guidelines (CHPS)
- ★ CTGBC assistance – flow chart on using integrated design
- ★ USGBC studies (cost, efficiency, etc)



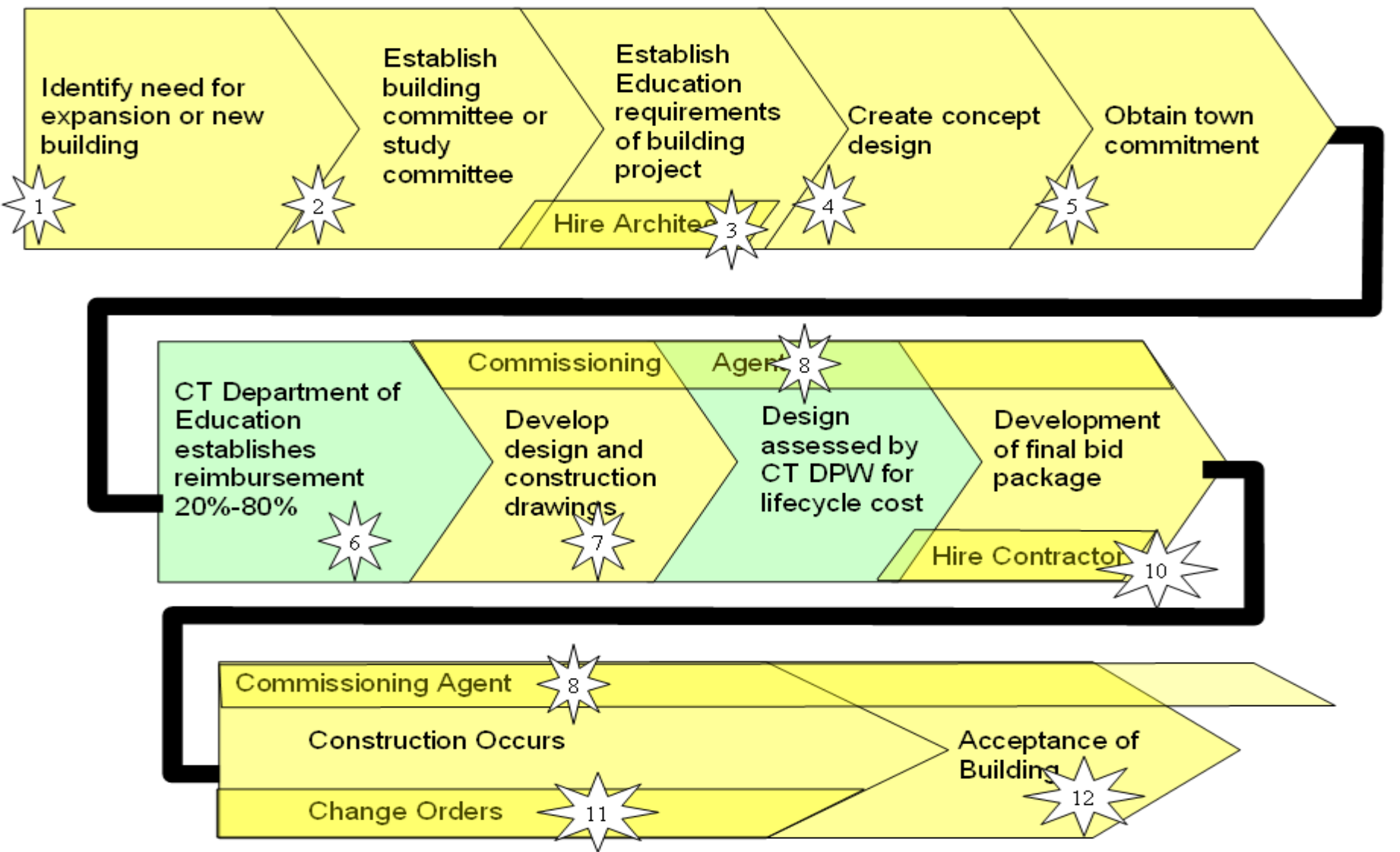
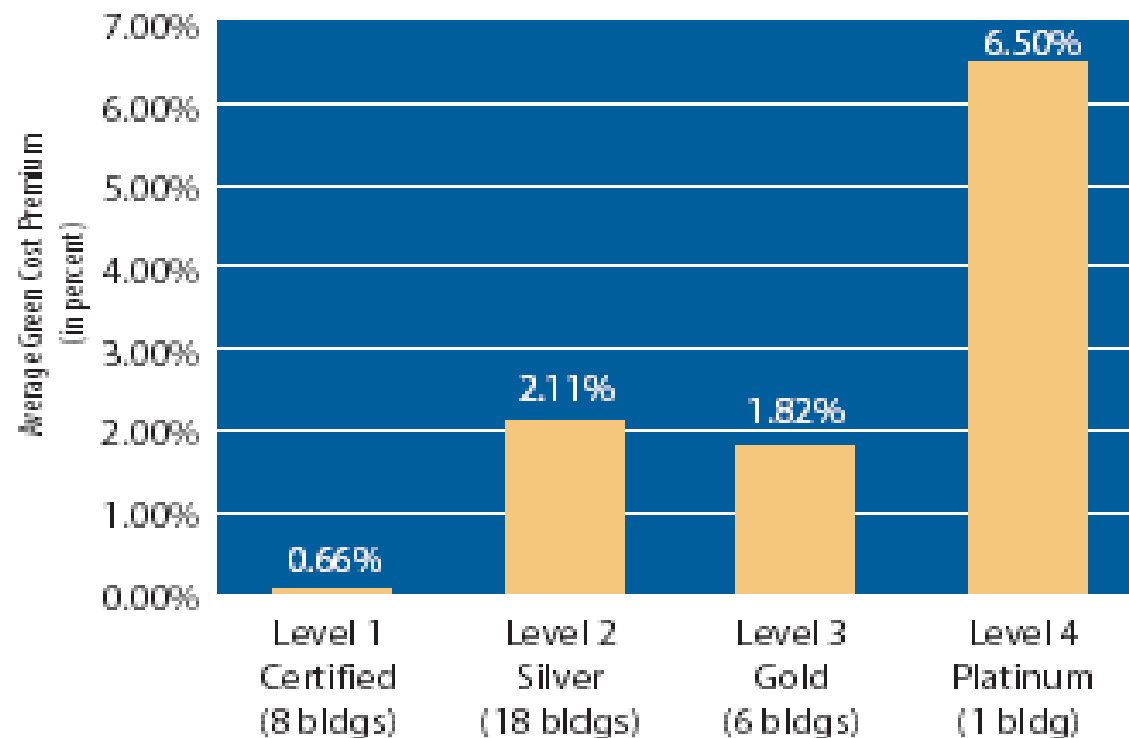


Figure 1
Average Green Cost Premium vs. Level of Green Certification
for Offices and Schools



Source: USGBC, Capital E Analysis

LEEDtm Registered Buildings in CT (as of 3/05)

K-12 Schools

Barnard Environmental Magnet School - New Haven

Danbury Elementary School

Danbury

Hamden Middle School

Hamden

Hotchkiss School

Lakeville

Middletown High School
and VoAg Center

Middletown



LEEDtm Registered Buildings in CT (continued)

Higher Education

Eastern CT State University Science /Classrooms
Willimantic

Eastern CT State University Residential Village
Willimantic

Southern CT State University Residence Hall
New Haven

Western CT State University Science Building
Danbury



LEEDtm Registered Buildings in CT (continued)

Higher Education

University of Connecticut - The Burton Family
Football Complex/The Mark R. Shenkman
Training Center Storrs

Western CT State University Residence Hall
Danbury

Wesleyan Residence Hall & Parking Garage
Middletown

Yale University Engineering Research Building
(laboratory) New Haven



LEEDtm Registered Buildings in CT (continued)

Non-Profit Organizations

- ★ Foodshare Inc. Distribution Facility
Bloomfield
- ★ Mark Twain House and Museum Center
Hartford

Commercial

- ★ Bristol Myers Squibb Co. Facilities Offices,
Warehouse & Maintenance Shops
Wallingford
- ★ Pfizer Clinical Research Unit
New Haven



Engaging Your Community

- ★ Hold community forums on upcoming construction projects
- ★ Bring in green building experts (need help- www.CTGBC.org)
- ★ Take the lead on supporting green building locally



Plan on Rising Fuel Costs

- ★ Is oil supply infinite?
- ★ Consider alternative sources and methods – solar, wind, fuel cells, geo-thermal, etc
- ★ Seek out incentive programs



Incentive Program

- ★ CT Clean Energy Fund
- ★ Encouraging the Generation and Use of Clean Energy
- ★ Examples: solar, wind, biomass, hydropower



Clean Energy Community Program

Program Description

- Launched in November of 2004 with CCM, SmartPower and the Connecticut Clean Energy Fund
- Qualifying Municipalities as of October 1, 2005
 - Bethany
 - Canton
 - Cheshire
 - Fairfield
 - Hamden
 - Mansfield
 - **Middletown**
 - Milford
 - New Britain
 - **New Haven**
 - Orange
 - Portland
 - Stamford
 - Trumbull
 - **West Hartford**
 - Westport
- Municipalities located in SWCT get twice the incentive.



Clean Energy Community Program

Clean Energy - Easy as 1-2-3!

20% by 2010 Campaign
Commitment to Clean Energy

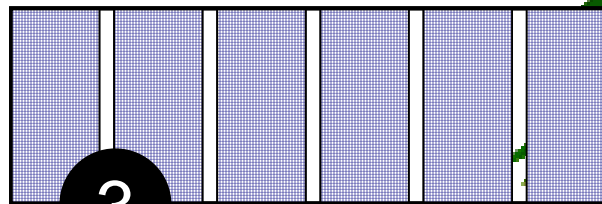


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Free 1 kW Solar PV



Visit SmartPower Booth!

Leading to the Future

- ★ Make integrated design a starting point
- ★ Use the long view (30 – 50 years) when considering construction
- ★ Consider operation and maintenance costs over the long term



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Contact Information

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